

AMENDMENTS TO THE CLAIMS

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (previously presented) A method for replacing a solvent evaporating from a microvolume of sample containing solvent and reactant which are to be reacted in an open microarea of a microfluidic device comprising the step of replacing evaporated solvent continuously via a microchannel that transports solvent to the microarea from a solvent reservoir, wherein the solvent is miscible with the sample and the microvolume of solvent comprises the reactant for performing a reaction within the microvolume of solvent on the microarea.
7. (previously presented) The method of claim 6, wherein the microarea, microchannel and reservoir are parts of the microfluidic device.
8. (currently amended) A method for replacing solvents for preventing samples from becoming desiccated comprising the following steps:
 - providing a microfluidic device having an open microarea for carrying a sample connected to a solvent reservoir by a microchannel;
 - providing the sample to the microarea which sample contains one or more reactants and a solvent that is miscible with the sample;
 - allowing the solvent to evaporate from said microarea; and
 - continuously replacing said evaporated solvent with solvent from said reservoir.
9. (previously presented) The method of claim 8 further comprising the step of anchoring the sample to the microarea.

10. (previously presented) The method of claim 7, wherein the reservoir is positioned so as to create an overpressure in the solvent which is in equilibrium with the interfacial pressure difference across the curved surface of the droplet or said reservoir is connected to pump means that either facilitate replacement of solvent by pumping solvent or pressurizing the reservoir.
11. (previously presented) The method of claim 7, wherein the microfluidic device comprises a plurality of microchannels and open chambers forming an array in the circular or rectangular format.
12. (previously presented) The method of claim 7, wherein one or more of the reactants are soluble in the solvent or bound to a solid support in contact with the microvolume.
13. (canceled)
14. (previously presented) The method of claim 8, wherein the microarea, microchannel and reservoir are parts of the microfluidic device.